

## Appendix B. Maximum Permissible Exposure

## 1. Maximum Permissible Exposure

### 1.1. Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

### 1.2. MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

**E** = Electric field (V/m)

**P** = Average RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

### 1.3. Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure  
For 2.4GHz Function

Antenna Type : Printed Antenna

<Ant. 1 >

Conducted Power for IEEE 802.11b 1Mbps (1TX) : 26.09 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	3.61	2.2961	26.09	406.4433	0.1857	1	Complies

Conducted Power for IEEE 802.11b 1Mbps (1TX) : 26.12 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	3.51	2.2439	26.12	409.2607	0.1827	1	Complies

Conducted Power for IEEE 802.11b 1Mbps (1TX) : 26.08 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	3.76	2.3768	26.08	405.5085	0.1917	1	Complies

Antenna Type : Printed Antenna

<Ant. 2 >

Conducted Power for IEEE 802.11b 1Mbps (1TX) : 25.88 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	4.30	2.6915	25.88	387.2576	0.2074	1	Complies

Conducted Power for IEEE 802.11b 1Mbps (1TX) : 25.87 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	3.87	2.4378	25.87	386.3670	0.1874	1	Complies

Conducted Power for IEEE 802.11b 1Mbps (1TX) : 25.92 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	3.74	2.3659	25.92	390.8409	0.1840	1	Complies

**Antenna Type : Printed Antenna**

&lt;Ant. 3 &gt;

**Conducted Power for IEEE 802.11b 1Mbps (1TX) : 26.01 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	5.34	3.4198	26.01	399.0249	0.2715	1	Complies

**Conducted Power for IEEE 802.11b 1Mbps (1TX) : 26.02 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	26.02	399.9447	0.2332	1	Complies

**Conducted Power for IEEE 802.11b 1Mbps (1TX) : 26.11 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	4.35	2.7227	26.11	408.3194	0.2212	1	Complies

**Antenna Type : Printed Antenna**

&lt;Ant. 1 + Ant. 2 + Ant. 3 &gt;

**Conducted Power for IEEE 802.11b 1Mbps (3TX) : 27.35 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	5.34	3.4198	27.35	543.2503	0.3696	1	Complies

**Conducted Power for IEEE 802.11b 1Mbps (3TX) : 27.02 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	27.02	503.5006	0.2936	1	Complies

**Conducted Power for IEEE 802.11b 1Mbps (3TX) : 27.10 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	4.35	2.7227	27.10	512.8614	0.2778	1	Complies

**Antenna Type : Printed Antenna**

&lt;Ant. 1 &gt;

**Conducted Power for IEEE 802.11g 6Mbps (1TX) : 21.78 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	3.61	2.2961	21.78	150.6607	0.0688	1	Complies

**Conducted Power for IEEE 802.11g 6Mbps (1TX) : 25.57 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	3.51	2.2439	25.57	360.5786	0.1610	1	Complies

**Conducted Power for IEEE 802.11g 6Mbps (1TX) : 21.41 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	3.76	2.3768	21.41	138.3566	0.0654	1	Complies

**Antenna Type : Printed Antenna**

&lt;Ant. 2 &gt;

**Conducted Power for IEEE 802.11g 6Mbps (1TX) : 22.04 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	4.30	2.6915	22.04	159.9558	0.0857	1	Complies

**Conducted Power for IEEE 802.11g 6Mbps (1TX) : 25.39 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	3.87	2.4378	25.39	345.9394	0.1678	1	Complies

**Conducted Power for IEEE 802.11g 6Mbps (1TX) : 21.83 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	3.74	2.3659	21.83	152.4053	0.0717	1	Complies

**Antenna Type : Printed Antenna**

&lt;Ant. 3 &gt;

**Conducted Power for IEEE 802.11g 6Mbps (1TX) : 20.92 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	5.34	3.4198	20.92	123.5947	0.0841	1	Complies

**Conducted Power for IEEE 802.11g 6Mbps (1TX) : 25.50 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	25.50	354.8134	0.2069	1	Complies

**Conducted Power for IEEE 802.11g 6Mbps (1TX) : 21.61 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	4.35	2.7227	21.61	144.8772	0.0785	1	Complies

**Antenna Type : Printed Antenna**

&lt;Ant. 1 + Ant. 2 + Ant. 3 &gt;

**Conducted Power for IEEE 802.11g 6Mbps (3TX) : 24.46 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	5.34	3.4198	24.46	279.2544	0.1900	1	Complies

**Conducted Power for IEEE 802.11g 6Mbps (3TX) : 28.05 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	28.05	638.2635	0.3722	1	Complies

**Conducted Power for IEEE 802.11g 6Mbps (3TX) : 24.07 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	4.35	2.7227	24.07	255.2701	0.1383	1	Complies

Antenna Type : Printed Antenna

<MCS0 - Ant. 1>

Conducted Power for IEEE 802.11n 20MHz MCS0 (1TX) : 20.16 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	3.61	2.2961	20.16	103.7528	0.0474	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS0 (1TX) : 25.54 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	3.51	2.2439	25.54	358.0964	0.1599	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS0 (1TX) : 20.65 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	3.76	2.3768	20.65	116.1449	0.0549	1	Complies

Antenna Type : Printed Antenna

<MCS0 - Ant. 2>

Conducted Power for IEEE 802.11n 20MHz MCS0 (1TX) : 21.49 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	4.30	2.6915	21.49	140.9289	0.0755	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS0 (1TX) : 25.31 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	3.87	2.4378	25.31	339.6253	0.1647	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS0 (1TX) : 21.23 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	3.74	2.3659	21.23	132.7394	0.0625	1	Complies



Antenna Type : Printed Antenna

<MCS0 - Ant. 3>

Conducted Power for IEEE 802.11n 20MHz MCS0 (1TX) : 19.89 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	5.34	3.4198	19.89	97.4990	0.0663	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS0 (1TX) : 25.58 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	25.58	361.4099	0.2107	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS0 (1TX) : 20.49 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	4.35	2.7227	20.49	111.9438	0.0606	1	Complies

Antenna Type : Printed Antenna

<MCS0 - Ant. 1+2+3>

Conducted Power for IEEE 802.11n 20MHz MCS0 (3TX) : 23.75 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	5.34	3.4198	23.75	237.1374	0.1613	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS0 (3TX) : 27.98 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	27.98	628.0584	0.3662	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS0 (3TX) : 23.84 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	4.35	2.7227	23.84	242.1029	0.1311	1	Complies



Antenna Type : Printed Antenna

<MCS8 - Ant. 1+2+3>

Conducted Power for IEEE 802.11n 20MHz MCS8 (3TX) : 24.18 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	5.34	3.4198	24.18	261.8183	0.1781	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS8 (3TX) : 29.01 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	29.01	796.1594	0.4642	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS8 (3TX) : 24.25 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	4.35	2.7227	24.25	266.0725	0.1441	1	Complies

Antenna Type : Printed Antenna

<MCS16 - Ant. 1+2+3>

Conducted Power for IEEE 802.11n 20MHz MCS16 (3TX) : 23.35 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2412	1.88	1.5417	23.35	216.2719	0.0663	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS16 (3TX) : 29.26 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	1.41	1.3836	29.26	843.3348	0.2321	1	Complies

Conducted Power for IEEE 802.11n 20MHz MCS16 (3TX) : 23.27 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2462	1.52	1.4191	23.27	212.3244	0.0599	1	Complies

Antenna Type : Printed Antenna

<MCS0 - Ant. 1>

Conducted Power for IEEE 802.11n 40MHz MCS0 (1TX) : 19.54 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2422	3.57	2.2751	19.54	89.9498	0.0407	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS0 (1TX) : 22.60 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	3.51	2.2439	22.60	181.9701	0.0812	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS0 (1TX) : 19.52 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2452	3.66	2.3227	19.52	89.5365	0.0414	1	Complies

Antenna Type : Printed Antenna

<MCS0 - Ant. 2>

Conducted Power for IEEE 802.11n 40MHz MCS0 (1TX) : 19.10 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2422	4.13	2.5882	19.10	81.2831	0.0419	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS0 (1TX) : 22.35 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	3.87	2.4378	22.35	171.7908	0.0833	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS0 (1TX) : 19.54 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2452	3.77	2.3823	19.54	89.9498	0.0426	1	Complies

Antenna Type : Printed Antenna

<MCS0 - Ant. 3>

Conducted Power for IEEE 802.11n 40MHz MCS0 (1TX) : 19.25 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2422	5.07	3.2137	19.25	84.1395	0.0538	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS0 (1TX) : 22.02 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	22.02	159.2209	0.0928	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS0 (1TX) : 18.92 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2452	4.46	2.7925	18.92	77.9830	0.0433	1	Complies

Antenna Type : Printed Antenna

<MCS0 - Ant. 1+2+3>

Conducted Power for IEEE 802.11n 40MHz MCS0 (3TX) : 21.56 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2422	5.07	3.2137	21.56	143.2188	0.0916	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS0 (3TX) : 24.97 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	24.97	314.0509	0.1831	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS0 (3TX) : 21.75 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2452	4.46	2.7925	21.75	149.6236	0.0831	1	Complies

Antenna Type : Printed Antenna

<MCS8 - Ant. 1+2+3>

Conducted Power for IEEE 802.11n 40MHz MCS8 (3TX) : 22.52 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2422	5.07	3.2137	22.52	178.6488	0.1142	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS8 (3TX) : 26.27 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	4.67	2.9309	26.27	423.6430	0.2470	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS8 (3TX) : 23.12 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2452	4.46	2.7925	23.12	205.1162	0.1140	1	Complies

Antenna Type : Printed Antenna

<MCS16 - Ant. 1+2+3>

Conducted Power for IEEE 802.11n 40MHz MCS16 (3TX) : 21.21 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2422	1.71	1.4825	21.21	132.1296	0.0390	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS16 (3TX) : 24.62 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2437	1.41	1.3836	24.62	289.7344	0.0797	1	Complies

Conducted Power for IEEE 802.11n 40MHz MCS16 (3TX) : 21.44 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
2.4GHz	0.2	2452	1.46	1.3996	21.44	139.3157	0.0388	1	Complies

For 5GHz Band:

<Ant. 1 > Antenna Type : PIFA Antenna

<6Mbps, Ant. 1 >

Conducted Power for IEEE 802.11a : 17.16 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5180	5.86	3.8548	17.16	51.9996	0.0399	1	Complies

Conducted Power for IEEE 802.11a : 19.18 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5200	5.93	3.9174	19.18	82.7942	0.0645	1	Complies

Conducted Power for IEEE 802.11a : 23.49 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5240	6.21	4.1783	23.49	223.3572	0.1857	1	Complies

Conducted Power for IEEE 802.11a : 19.62 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5745	5.65	3.6728	19.62	91.6220	0.0669	1	Complies

Conducted Power for IEEE 802.11a : 20.09 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5785	4.93	3.1117	20.09	102.0939	0.0632	1	Complies

Conducted Power for IEEE 802.11a : 18.18 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5825	4.18	2.6182	18.18	65.7658	0.0343	1	Complies

<Ant. 1> Antenna Type : PIFA Antenna / <Ant. 2> Antenna Type : Printed Antenna /

<Ant. 3> Antenna Type : PIFA Antenna

<6Mbps, 1S3T, CDD>

Conducted Power for IEEE 802.11a : 22.25 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5180	6.10	4.0738	22.25	167.8804	0.1361	1	Complies

Conducted Power for IEEE 802.11a : 21.80 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5200	6.34	4.3053	21.80	151.3561	0.1296	1	Complies

Conducted Power for IEEE 802.11a : 25.30 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5240	6.36	4.3251	25.30	338.8442	0.2916	1	Complies

Conducted Power for IEEE 802.11a : 24.17 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5745	5.65	3.6728	24.17	261.2161	0.1909	1	Complies

Conducted Power for IEEE 802.11a : 25.59 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5785	4.93	3.1117	25.59	362.2430	0.2242	1	Complies

Conducted Power for IEEE 802.11a : 24.50 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5825	5.03	3.1842	24.50	281.8383	0.1785	1	Complies



<Ant. 1 > Antenna Type : PIFA Antenna

<Nss1MCS0, Ant. 1 >

Conducted Power for IEEE 802.11ac 20MHz : 17.79 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5180	5.86	3.8548	17.79	60.1174	0.0461	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 19.60 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5200	5.93	3.9174	19.60	91.2011	0.0711	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 23.30 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5240	6.21	4.1783	23.30	213.7962	0.1777	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 18.96 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5745	5.65	3.6728	18.96	78.7046	0.0575	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 20.25 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5785	4.93	3.1117	20.25	105.9254	0.0656	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 17.91 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5825	4.18	2.6182	17.91	61.8016	0.0322	1	Complies



<Ant. 1> Antenna Type : PIFA Antenna / <Ant. 2> Antenna Type : Printed Antenna /

<Ant. 3> Antenna Type : PIFA Antenna

<Nss1MCS0, 1S3T, CDD>

Conducted Power for IEEE 802.11ac 20MHz : 21.91 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5180	6.10	4.0738	21.91	155.2387	0.1258	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 23.39 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5200	6.34	4.3053	23.39	218.2730	0.1870	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 25.40 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5240	6.36	4.3251	25.40	346.7369	0.2984	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 23.63 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5745	5.65	3.6728	23.63	230.6747	0.1686	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 24.53 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5785	4.93	3.1117	24.53	283.7919	0.1757	1	Complies

Conducted Power for IEEE 802.11ac 20MHz : 23.37 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5825	5.03	3.1842	23.37	217.2701	0.1376	1	Complies

<Ant. 1> Antenna Type : PIFA Antenna / <Ant. 2> Antenna Type : Printed Antenna /

<Ant. 3> Antenna Type : PIFA Antenna

<Nss1MCS0, 1S3T, TXBF>

Conducted Power for IEEE 802.11ac 20MHz : 21.03 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5180	6.80	4.7863	21.03	126.7652	0.1207	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{EQ}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 6.80dBi$

Conducted Power for IEEE 802.11ac 20MHz : 20.97 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5200	6.96	4.9659	20.97	125.0259	0.1235	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{EQ}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 6.96dBi$

Conducted Power for IEEE 802.11ac 20MHz : 23.17 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5240	7.07	5.0933	23.17	207.4914	0.2102	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{EQ}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 7.07dBi$

**Conducted Power for IEEE 802.11 ac 20MHz : 23.33 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5745	7.25	5.3088	23.33	215.2782	0.2274	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{EQ}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 7.25\text{dBi}$

**Conducted Power for IEEE 802.11 ac 20MHz : 20.46 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5785	6.80	4.7863	20.46	111.1732	0.1059	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{EQ}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 6.80\text{dBi}$

**Conducted Power for IEEE 802.11 ac 20MHz : 21.12 dBm**

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5825	6.68	4.6559	21.12	129.4196	0.1199	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{EQ}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 6.68\text{dBi}$

<Ant. 1 > Antenna Type : PIFA Antenna

<Nss1MCS0, Ant. 1 >

Conducted Power for IEEE 802.11ac 40MHz : 17.58 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5190	5.90	3.8905	17.58	57.2796	0.0443	1	Complies

Conducted Power for IEEE 802.11ac 40MHz : 21.65 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5230	6.07	4.0458	21.56	143.2188	0.1153	1	Complies

Conducted Power for IEEE 802.11ac 40MHz : 17.24 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5755	5.79	3.7931	17.24	52.9663	0.0400	1	Complies

Conducted Power for IEEE 802.11ac 40MHz : 20.37 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5795	5.12	3.2509	20.37	108.8930	0.0704	1	Complies

<Ant. 1 > Antenna Type : PIFA Antenna / <Ant. 2 > Antenna Type : Printed Antenna /

<Ant. 3 > Antenna Type : PIFA Antenna

<Nss1MCS0, 1S3T, CDD>

Conducted Power for IEEE 802.11ac 40MHz : 21.76 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5190	6.04	4.0179	21.76	149.9685	0.1199	1	Complies

Conducted Power for IEEE 802.11ac 40MHz : 24.94 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5230	6.44	4.4055	24.94	311.8890	0.2734	1	Complies

Conducted Power for IEEE 802.11ac 40MHz : 22.75 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5755	5.79	3.7931	22.75	188.3649	0.1421	1	Complies

Conducted Power for IEEE 802.11ac 40MHz : 25.91 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5795	5.20	3.3113	25.91	389.9420	0.2569	1	Complies

<Ant. 1> Antenna Type : PIFA Antenna / <Ant. 2> Antenna Type : Printed Antenna /

<Ant. 3> Antenna Type : PIFA Antenna

<Nss1MCS0, 1S3T, TXBF>

Conducted Power for IEEE 802.11ac 40MHz : 21.50 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5190	6.82	4.8084	21.50	141.2538	0.1351	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{CH}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 6.82\text{dBi}$

Conducted Power for IEEE 802.11ac 40MHz : 23.61 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5230	7.18	5.2240	23.61	229.6149	0.2386	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{CH}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 7.18\text{dBi}$

Conducted Power for IEEE 802.11ac 40MHz : 20.97 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5755	7.68	5.8614	20.97	125.0259	0.1458	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{CH}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 7.68\text{dBi}$

Conducted Power for IEEE 802.11ac 40MHz : 22.41 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5795	7.07	5.0933	22.41	174.1807	0.1765	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{CH}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 7.07\text{dBi}$

<Ant. 1 > Antenna Type : PIFA Antenna

<Nss1MCS0, Ant. 1 >

Conducted Power for IEEE 802.11ac 80MHz : 16.21 dBm

Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
				(dBm)	(mW)			
0.2	5210	5.94	3.9264	16.21	41.7830	0.0326	1	Complies

Conducted Power for IEEE 802.11ac 80MHz : 18.04 dBm

Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
				(dBm)	(mW)			
0.2	5775	5.19	3.3037	18.04	63.6796	0.0419	1	Complies

<Ant. 1 > Antenna Type : PIFA Antenna / <Ant. 2 > Antenna Type : Printed Antenna /

<Ant. 3 > Antenna Type : PIFA Antenna

<Nss1MCS0, 1S3T, CDD >

Conducted Power for IEEE 802.11ac 80MHz : 20.59 dBm

Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	The maximum combined Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
				(dBm)	(mW)			
0.2	5210	6.02	3.9994	20.59	114.5513	0.0911	1	Complies

Conducted Power for IEEE 802.11ac 80MHz : 21.42 dBm

Distance (m)	Test Freq (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	The maximum combined Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
				(dBm)	(mW)			
0.2	5775	5.19	3.3037	21.42	138.6756	0.0911	1	Complies



<Ant. 1> Antenna Type : PIFA Antenna / <Ant. 2> Antenna Type : Printed Antenna /

<Ant. 3> Antenna Type : PIFA Antenna

<Nss1MCS0, 1S3T, TXBF>

Conducted Power for IEEE 802.11ac 80MHz : 18.84 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5210	6.72	4.6989	18.84	76.5597	0.0716	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{EQ}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 6.72dBi$

Conducted Power for IEEE 802.11ac 80MHz : 19.00 dBm

Test Mode	Distance (m)	Test Freq (MHz)	Directional Gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
					(dBm)	(mW)			
5GHz	0.2	5775	7.28	5.3456	19.00	79.4328	0.0845	1	Complies

Note:  $DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{EQ}} g_{j,k} \right\}^2}{N_{ANT}} \right] = 7.28dBi$

**CONCLUSION:**

Both of the WLAN 2.4GHz Band and WLAN 5GHz Band function can transmit simultaneously, the formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + .....etc. < 1$

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is  $0.4642 / 1 + 0.2984 / 1 = 0.7626$ , which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.